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ABSTRACT

Less than five percent of the pupils in northeastern Rhode Island Region I are transported to schools or educational centers outside of their districts. However, about 20 percent of the total transportation costs are expended for out-of-district transportation of nonpublic school, vocational, and special education students. The purpose of the study described was to determine if it would be feasible for the four school systems in the region to reduce or limit their out-of-district transportation costs by sharing services and forming a cooperative interdistrict transportation program. A search of the literature on school transportation was conducted in the areas of improving traffic arrangements, energy-saving techniques, cost-saving measures, and organization of cooperatives, specifically a transportation cooperative. Current interdistrict school transportation practices in the four school systems were identified and three cooperative transportation plans offered. A pilot plan, as an alternative to the three master plans, was suggested as a more feasible way of testing the cooperative plan and determining the actual cost savings obtained by forming a cooperative. The study concludes by proposing that a cooperative transportation group be formed by the four school districts and makes a number of related recommendations. (Author/MLP)

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A PLAN FOR AN OUT-OF-DISTRICT TRANSPORTATION COOPERATIVE IN RHODE ISLAND

By

ROBERT W. PLANTE

A Field Project Proposal Submitted in Partial
Fulfillment of the Requirements for the
Certificate of Advanced Graduate Study
in
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A PLAN FOR AN OUT-OF-DISTRICT TRANSPORTATION COOPERATIVE IN RHODE ISLAND

I. Introduction

Northeastern Rhode Island, typical of New England enjoys four distinctive seasons. Children who live there usually take a bus to school to protect them from the weather and to ensure that they arrive at their destination safely.

Cumberland, largest of the four areas in northeastern Rhode Island, contains 27.1 square miles, North Smithfield has 24.5 square miles, Lincoln has 18.6 square miles, and Woonsocket has 7.9 square miles. Because of the distances between many schools and the children's homes, walking is usually limited to only those living in close proximity to their schools. So taking a bus to school is essential for most children in these areas, and especially for secondary students because each town only has one high school facility.

There is also no public transit system available for students in these towns so the alternatives for students are to walk, provide their own transportation, or hopefully ride the bus.

A PLAN FOR AN OUT-OF-DISTRICT TRANSPORTATION COOPERATIVE IN RHODE ISLAND

CONTEXT

Inflation and budget cuts are making it increasingly difficult for local Rhode Island school districts to meet the demands of educational programs and services. This is especially true of those programs and services which go beyond their basic educational program. Such programs and services are special education, vocational education, computer services, and inservice training programs for staff. These programs require transportation and services which are rarely cost-efficient, especially when operating separately from other systems. A co-operative arrangement among several adjacent school systems appears to be one viable way of offsetting the cost of such programs.

Transportation costs, especially, have risen dramatically in the past few years. The cost of gasoline is expected to continue to rise. The hourly wages and benefit programs of the bus drivers also will increase as the rate of inflation increases. Future school district contracts with private transportation companies may include both fuel and labor escalation clauses.

According to a survey done by the R. I. State Department of Education in March 1980, the following changes have been observed in school transportation since the 1975-76 school year. There has been:

a. a 7.5% decline in the number of pupils transported;

b. a 27.5% increase in the number of miles driven;

c. a 12.6% increase in the number of school buses; and

d. a 34.9% increase in total expenditures.

The increase in b. and c. is attributed to these two factors:

a. a continued shift of population from the city to the suburbs and rural areas of Rhode Island;

b. an increase in the number of services mandated by the State in special education and in recent legislation establishing regional school bus districts. (P.L.16-21.1). (Beaulieu March 1980.)

While some districts have already curtailed or eliminated bus services within their district, many are not able to decrease their out of district bus services because of recent legislation.

In 1977, the state of Rhode Island passed three laws (P.L.16-21.1, 16-21.3, and 16-21.4) which provided for the following:

a. requires five regional school bus districts,

b. requires the busing of public/non-public students to attend a school outside the district, if there is no similar facility within the district;

c. requires the busing of special education students outside of the district, if it is necessary for the

student to enroll in such a facility and no similar facility exists within the region; and

d. requires the school committees to enter into contracts and cooperative arrangements with other school committees to help them meet the requirements of the law.

Pursuant to this the Board of Regents, in their January session of 1980, set aside $2,500 in Permanent School funds to support local school districts who would be interested in planning and designing a school transportation cooperative with other adjacent school districts. However, according to the R. I. State Department of Education, very few school systems had applied for this grant as of September 10, 1980. None of the systems considered for the study has applied for this grant.

A study done by the State Department of Education on Out-of-District transportation costs reveals the following information for the Region I, 1978-79 academic year.

Total Cost of Transportation for Region I Schools

Public School Students			Non-Public Students	Total
Vocational	Special Education	Reg./Co-op. Programs		
$45,424.	$304,671.	$3,998.	$5,672.	$359,766.

Per pupil cost for transportation per program for Region I, 1978-79.

Vocational	Special Education	Reg./Co-op.	Non-Public
$185.	$1,167.	$500.	$100.

According to the study less than 5% of the pupils bused are transported out of the district, but about 20% of the total transportation costs are expended for this out-of-district transportation. Transportation for special education students represents over 70% of the out of district transportation costs (Beaulieu, March 1930).

This information suggests that the systems to be studied might seriously consider investigating, with the aid of the Regent's grant, the possibility of cooperative transportation programs, especially since, in many cases, adjacent school systems have been sending half full buses to the same regional or state facility.

Statement of Problem

This study will examine transportation data in an attempt to answer the following question:

Is it feasible for the Region I systems to reduce or limit their out-of-district transportation costs by sharing services and forming a full school cooperative inter-district transportation program?

Purpose

The purpose of this project will be to identify current inter-district school transportation practices in the Region I school district. Data will be examined in the following areas:

1. enrollment in out-of-town programs

a. vocational
b. co-op/regional
c. special education
d. non-public school

2. location and name of out-of-town programs
3. current systems of transportation required
   a. town owned
   b. private companies
   c. independent driver/owners
4. current contractual arrangements with bus companies
5. number of buses used in each area
6. routes taken/miles driven
7. time schedules of various routes
8. cost of transportation required
   a. total
   b. per enrollment
   c. fuel
   d. repairs
   e. drivers

The potential cooperative area to be studied is comprised of the Woonsocket, North Smithfield, Cumberland and Lincoln school districts.

Definitions

For the purposes of this study, cooperative services shall mean those programs/services which are delivered on a multi-district basis, and in which the participating school districts share in their cost and maintenance.

Out-of-town, or out-of-district transportation shall mean that transportation which, by law requires the busing of public

non-public, special education, and vocational students to out of town schools if there is no similar facility within the district.

II. Review of the Literature

This review of the literature is divided into five parts. The first part will review studies which have investigated "Improving Traffic Arrangements," including research on improved bus routing techniques and other studies which will facilitate the planning and scheduling of school bus transportation.

The second part will review "Energy Saving Techniques" and discuss procedures schools may take to save on their transportation expenses.

The third will review "Cost Saving Measures" which will help school systems keep the cost of transportation down.

The "Organization of Cooperatives" will be the fourth topic. This section will present some methods used in establishing and maintaining a cooperative, as well as reviewing some of the benefits of forming a cooperative.

The final topic is a review of the literature about "Organizing a Transportation Cooperative" and the benefits and problems involved in establishing a cooperative transportation system. The five areas reviewed for the study are listed below:

A. Improving Traffic Arrangements

B. Energy Saving Techniques

C. Cost Saving Measures

D. Organization of Cooperatives

E. Organizing a Transportation Cooperative

Improving Traffic Arrangements

Computer scheduling and routing of school buses is the most frequently suggested way of improving school bus transportation. It is stated that the use of computers to schedule and route school buses is more efficient because the computer examines a large number of variables and alternatives for each stop and route, to and from school, and selects the best way. The computer can be more flexible to because it could take new additions, deletions or changes in the routes with a minimum of difficulty. (Bayliss, 1975; Beaulieu, 1980; Boyer, 1965; "Computers Make Getting There", 1970; "Computer Router", 1973; Couzins, 1978; "Invite a Computer", 1977; Kimball, 1971; Newton and Thomas, 1970; Nichols, 1967; Richard, 1973; Rochetti et al, 1974; Ross et al, 1968; "39 Ways", 1979.)

It is also noted that using the computer saves staff time required to prepare the bus schedule. The task can be reduced to whatever time it takes to insert the data into the computer and to read the results once the computer has established the schedule. This can save the cost of the staff time spent on the project as well as making the bus routes more efficient.

which in turn can save fuel, bus travel time, driver time, reduce the cost of driver wages, and reduce the number of routes traveled (Bayliss, 1974; Boyer, 1964; "Computers Make Getting There", 1970; "Computer Router", 1973; "Invite a Computer", 1977; Kimball, 1971; Newton et al, 1970; Nicholas, 1967; "R.I. Comprehensive Plan", 1972; Rochetti et al, 1974). Many of the studies, (Boyer, 1964; "Computers Make Getting There", 1970; "Invite a Computer", 1977; Kimball, 1971; Nichols, 1967; Rochetti et al, 1974) suggest that another advantage to using the computer is that it also provides the school district with a printed list of routes, schedules, students names and addresses, bus numbers, etc., already printed. This also saves the district time and money and provides a written record of the transportation program for that year.

One of the benefits of using computer routing and scheduling is that the school district has all the information already available to the system, since it is the same information necessary for hand scheduling. Boyer (1964) found that the greater the student population density the more efficient the school routes prepared by the computer become. This is especially important for large school districts, where the amount of information needed to route is very large and the benefits derived from the computer for routing and scheduling can be matched by the printed information the computer provides.

There are some disadvantages to using a computerized scheduling system, however. The primary disadvantage is the high cost of a computer program. In some cases the cost can be as high as $50,000. Another problem is that because of the vast differences among school districts, every computer transportation program has to be individually tailored for each district. The uniqueness and complexity of each district's transportation system affects the cost of a computerized program (Couzins, 1978; Richards, 1973). Couzins (1978) mentions that his school district, using computer prepared routes and staggered starting and dismissal times saved the use of 30 buses. He felt that this more than saved the cost of the computer system.

Other studies (Bayliss, 1974; Couzins, 1978; Newton et al, 1970; Rochetti et al, 1974) mentioned savings of 7 to 32% on transportation costs with the use of computer scheduling and routing. It may be that there are other factors in addition to the computer which help increase savings. But it seems safe to assume that computer scheduling is a significant factor.

Robbins and Turner (1975) offer an alternative to using computer scheduling which they call "wedging bus routes". They claim it saves them up to 15.3% on mileage per day and it only takes them ten hours to schedule. The plan involves dividing the area around the school into wedge-shaped pieces.

A bus travels up one side of the wedge and down the other until the bus is full, and then the next bus starts from that point and continues until it is full, and so on. Each stop is planned at various points around the edge to be midway for most groups of students. Robbins and Turner (1975) claim that this plan does not mean a longer ride for students nor an increase in the distance traveled. It is a simple method to use and can save the cost of computer services.

Any good system of transportation may need a number of different methods to help improve the efficiency of its program. Computer routing/scheduling is one viable method but as Couzins (1978) mentioned earlier, using a number of different methods may help to improve and enhance a program. One method suggests staggering the starting and dismissal times of schools. This means that secondary schools start earlier than elementary schools. In this way the same buses which pick up and return secondary students will do the same for the elementary children but at a later time. If all schools are on the same time schedule, then staggering these times might mean a 50% saving in transportation costs ("Augusta Bus," 1980; Bayliss, 1974; Beaulieu, 1980; Couzins, 1978; Hill, 1975; Hilliker, 1965; Spain, 1975; "39 Ways," 1979).

One of the problems facing route planners is the length of time some students have to spend on the bus going to and

coming from school. The R.I. Department of Education proposed that the maximum amount of time a student travels should be no more than 45 minutes each way ("Proposed Criteria," 1970). The Massachusetts Division of Special Education suggested a 45 minute to 60 minute limit on travel time (Bayliss, 1974). Brody (1971) suggested that an hour and fifteen minutes should be the upper limit. In order to keep within these limits and improve a transportation system, changes must be made in three areas; (a) "pick-up" and "drop off" procedures, (b) route selection, and (c) driver efficiency (Yuker et al, 1967).

One way to improve "pickup" and "drop off" procedures is to decrease the number of stops by increasing the walking distance to the stops (or to school) and to establish central pick up points (Beaulieu, 1980; Hilliker, 1965; Mishow and Stewart, 1970; Rochetti et al, 1974). The fewer stops required, the more time saved. By increasing the walking distances there also can be a decrease in the number of students who are ineligible for bus transportation, thus decreasing the number of buses needed.

Mishow and Stewart (1970) suggest that when selecting the best route to take one can save a great deal of time by following these recommendations.

1) Pick up and discharge students on the home side of the street when possible.

2) Use side streets for bus stops.

3) Schedule stops where students need to cross only at traffic lights.

4) Avoid personal privilege stops.

5) Avoid extreme hazards such as dangerous hills, high accident intersections, curves, construction areas, etc (pp. 40-41).

Planning the route so that the driver will make as many right turns as possible also can be considered. This way the driver will not have to cross against the traffic flow ("39 Ways", 1979).

All of the above suggestions are important because they can help avoid losing time when buses have to wait for children to cross the street, or when a bus is caught in traffic, hazardous conditions or attempting to turn left against traffic. Bus drivers can save time if they are permitted to take their buses home with them. If possible routes should begin and end as close to a driver's home as possible. This way time and fuel will be saved because of the shortened distance between the bus pickup and the first bus stop (Brody, 1971; "Three Steps", 1979; "39 Ways", 1979).

If it is not possible to transport students quickly and efficiently, school districts might consider doing what Milton Hoffman's school district did in Colorado. Because of the long

ride required to transport the children to their local school and to keep boredom and disruptive behavior to a minimum, taped programs were installed on each bus. The taped programs, purchased with a Title IV grant, include selections at 3 levels for grades 1-4, 5-8, and 9-12, and include both educational and recreational material (Hoffman, February 1968; Hoffman, May 1968).

Energy Saving Techniques

Studies indicate that good routine maintenance of the bus fleet is essential to energy conservation. They recommend frequent vehicle inspections (every 2000 miles at least) and daily checkups to prevent breakdowns on the road. Drivers should be taught to be fuel efficient and to use good energy saving techniques when driving. Keeping tires inflated and the gas tank full reduce evaporation are other ways to help save (Beaulieu, 1980; Grossbach et al, 1974; Reynolds, 1972; Sumners, 1971; "Surveys Show", 1970; "39 Ways," 1979).

Some studies suggest that each district find many different suppliers of fuel in case there is another fuel shortage. They even suggest that a district have their own storage tanks and, if need be, prepare to hire tank trucks to get fuel for school vehicles. In times of crisis or shortages each system should be prepared to operate in as efficient a manner as possible ("Surveys Show", 1970; "39 Ways", 1979).

When buying or contracting for school transportation, a

district should "shop around" and buy the "right bus" for the job. If a district is in a rural area, they might consider buying smaller vehicles or "mini" buses to accommodate the students living in outlying areas, rather than buying a heavier, larger school bus. Especially when only a few students live in some rural areas it makes more sense to send a smaller bus for them that will be filled to capacity than a larger bus which is not (Grossbach et al, 1974; Reynolds, 1972; Summers, 1971; "Surveys Show", 1970; "39 Ways", 1979).

Some studies suggest that school districts might also consider using alternate types of fuel, such as diesel or lp. gas. Diesel engines cost more to buy but their operating and maintenance costs are lower. They also are more fuel efficient and less flammable than gasoline. LP-Gas, on the other hand, is also economical to use and requires less maintenance. It is also less polluting and safer than gas ("Case for Diesel", 1972; Kreutzer, 1972; "39 Ways", 1979). The problem, of course, is availability of the fuel and the accessibility to the type of vehicle which can run on these types of fuel, as well as the extra initial expense of purchasing these vehicles.

Perhaps the most effective way to save energy is to reduce or eliminate school transportation. Where possible, many studies suggest, students should be required to use public transportation. This is only possible, of course, in those

areas where public transportation exists on a regular basis. The school district can give students discount tokens and in this way help to subsidize the public transit system. Many critics say that this will overload the transit system but the response to this argument is that the extra passengers will stimulate the transit system. Perhaps in the morning there might be some problems because school starting times coincide with "rush hour" traffic. However, dismissal time is usually in the middle of the afternoon, before the evening rush hour traffic begins (Beaulieu, 1980; "Bold New", 1975; Grossbach et al, 1974; Hill, 1978; Maunder, 1974; "Should You Own", 1976; Spain, 1975; "Study of Buffalo", 1969; Taylor, 1973).

Encouraging students to use bikes as transportation to school was also mentioned (Beaulieu, 1980; Grossbach et al, 1974). This would only be effective in areas where the weather is moderate most of the year and where students live reasonably close to the school. To encourage this, schools can provide protected parking areas.

Another suggested solution was to have older students drive themselves or carpool with other students. While this would save energy and money for the school district it would not save energy for the nation. Another suggestion was to have parents drive students to and from school, and perhaps even

for extracurricular or athletic events after school. Again, this would save the school district money and energy but not the parents or the country (Grossbach et al, 1974; Taylor, 1973; "39 Ways", 1979).

Perhaps if parents are not able or willing to transport their children to athletic or extracurricular activities, school districts might investigate the possibility of sharing buses with other systems, especially those contiguous to the school district. This way both are benefitting by sharing costs and continuing activities (Beaulieu, 1980; Taylor, 1973; "30 Ways", 1979).

All of the above suggestions are not applicable or not generalizable to all school districts. It appears that one choice remains, the reducing or eliminating of these services to help keep costs in line. Many districts have cut back on field trips, or set limits on the distance that they can travel. Or they have cut back on after school late buses, which effectively limits participation in extra-curricular activities. (Adams, 1973; Beaulieu, 1980; Grossbach et al, 1974; Pope, 1974; "Schools Want", 1973; Taylor, 1973; "39 Ways", 1979).

Another way to save energy and reduce transportation costs is to use buses only four days a week instead of five. Although the enthusiasm for a four day school has died down somewhat, it still is a viable alternative to reduce total energy consumption without reducing or eliminating services.

Students would still travel the same distances and at the same times but only on four school days instead of five, saving a considerable amount (one-fifth of the transportation costs). ("Four Day School", 1974; Grossbach et al, 1974; "Schools Want", 1973; "State Board Tells", Taylor, 1973).

Cost Saving Measures

Many energy saving techniques such as the reduction or elimination of services are also cost saving measures. Rather than be redundant, this section will present only those measures which have not been discussed in the previous section.

One of the suggestions in the previous sections was to have students use public transportation, and in some cases provide reduced bus fares. A way of cutting costs, therefore appears to be to eliminate subsidized fares (Kennedy, 1980; O'Toole, 1979; Peritz, 1980). According to their 1975 Annual Report the R. I. Transit Authority had free or reduced ridership which passed the one million mark ("R. I. Public Transit", 1975. p.4). Undoubtedly most of these riders were not students, but if a small state like Rhode Island has this number of free or reduced riders imagine what the number would be in more densely populated areas! Cutting out reduced fares can offer a big savings for those systems which now provide them.

Rollins (1979) and Hubbard (1966) both suggest that school districts will save money if they constantly examine school

enrollment and realign enrollment areas so that each has a numerically balanced student population. This will also help to keep buses full by realigning attendance areas. Should a bus not be filled to capacity, the district might choose to eliminate the bus, or use a smaller vehicle.

Besides altering bus routes one might consider moving the student closer to the school. Students from outlying areas might be able to "board" in town, closer to school, during the week and return home on weekends ("Transportation and the Mentally Retarded", 1972). Or the town might try to use the local taxi service or have commuters from the students' area bring them into town ("How to Transport", 1977). Using taxis might be cheaper than using a bus, especially if it is a rural area. The taxi company might be willing to provide special rates for the continued business it would generate.

Having commuters bring in students on the way to work and returning them home also seems a good idea. There are problems, however. The availability of such commuters, the security problems involved, and the insurance problems might discourage many communities from using this alternative.

There is much discussion in the literature about the advisability of owning a vehicle fleet versus contracting with a transportation company. Those favoring district ownership feel that the district has more flexibility in the use of the buses and can be assured of more consistent service than

if they contracted with an outside agency. School districts do not have to worry about driver strikes as much, or not having the vehicles available whenever they want them, when they own their own fleet. In addition, they might save money by not having to pay for the transportation company's contractor costs and overhead which would be included in the total transportation cost (Brody, 1971; "Feasibility of a Centralized", 1969; Hilliker, 1965; Sanders, 1968; "Should You", 1976).

On the other hand, if it owned buses a system would have to provide its own drivers, maintenance staff, storage and maintenance facility, and management staff to oversee the transportation program (Olfson, 1970; Summers, 1971). There are advantages to both arrangements. If the facilities exist to own a fleet, and it is cost effective to do so, then the possibility should be considered. However, a district should examine the total cost of each alternative. Rollins (1979) suggests that if a district presently contracts with a transportation company, and the service and cost are acceptable, it should consider extending the contract. As costs go up, a system might save money by extending an existing contract to avoid increases later.

Another method of cutting costs is to establish a centralized transportation facility. Such a facility can house the maintenance area and storage facility for a number of school districts. By sharing staff and pooling resources a system

can sometimes save money. Also consolidated purchases and purchasing supplies and materials in bulk can reduce costs ("Feasibility of a Centralized", 1969; Johns, 1978; "R.I. Comprehensive Plan", 1972). This arrangement has its advantages providing that the distances between the central facility and the school districts is not too great.

Many studies suggested that school districts also consider pooling services, resources, and transportation with the community, other school districts, and the state to help save money. In this way smaller districts can share facilities and services with other districts and acquire benefits they might not otherwise be able to afford because of the expense involved. The same quality of services larger school districts provide can be offered without having to incur the same expense ("Accountability", 1971; Alloway, 1969; Edelman, 1969; "Educational Opportunities", 1973, Hilliker, 1965; Hubbard, 1966; Jongeward and Heesacher, 1969; "Progress Report", 1971; "R.I. Comprehensive Plan", 1972; "Shared Services", 1968; Spain, 1975; "Study of Buffalo", 1969).

It was also suggested that school districts and communities might share transportation services. Vehicles that transport students in the morning and afternoon can be used as public transportation too, or as a senior adult shuttle, day care, or mentally retarded transportation. The school district can also share in the cost of the municipal transportation system

as mentioned before. In this way, vehicles can receive maximum use and the expense can be shared by all ("Accountability", 1971; Hilliker, 1965; Jongeward et al, 1969; "R. I. Comprehensive Plan", 1972; Spain, 1975; "Study of Buffalo", 1969).

Many communities and school districts, according to the research, feel that they should share services and facilities and consider forming a cooperative purchasing arrangement. ("Accountability", 1971; Alloway, 1969; Edelman, 1969; "Educational Opportunities", 1973; "Feasibility", 1969; Hubbard, 1966; Jongeward and Heesacher, 1969; "Progress Report", 1971; "R. I. Comprehensive Plan", 1972' "Should You Own", 1976; Spain, 1975; "Study of Buffalo", 1969).

Organizing a Cooperative

What conditions are necessary to facilitate the formation of a cooperative? In most cases school districts feel a common need to expand or continue services and programs which have become too expensive to operate alone. They may also wish to upgrade their services and provide programs that are not possible because of a lack of staff, facilities, or finances. For example, many cooperative areas have a regional vocational facility or share a regional library and media facility. They can have these services without expending a great deal of additional money and effort ("Education Opportunities", 1973; Hughes, Archilles, Leonard, Spence, 1972;

Jongeward, 1972; Lamberti, 1980; Schmidt, 1975; Simkin, 1970; Worsham, October 1, 1972).

Some systems also share administrative staff and ideas to help solve mutual problems which might be plaguing school districts. Teachers in subject areas such as foreign language can be shared also to help expand programs where there might be a shortage of teachers (Brignolo, 1973; "Educational Opportunities", 1973; Forsythe and Hardin, 1969; Hughes et al, 1972; Jongeward, 1972; Lamberti, 1980).

But the real impetus to forming a cooperative arrangement is for the state to provide funds to help in the formation of cooperatives. By setting aside funds to facilitate a cooperative organization, making regulations for the formation of cooperatives very general and flexible, and by establishing the necessary legal changes and arrangements, the formulation of a cooperative can be encouraged. The state education department also should offer the services of their staff to help organize cooperative arrangements (Beaulieu and Colt, 1979; "Cooperative Services", 1974; "Educational Opportunities", 1973; Schmidt, 1975).

It is important for the state and community as well as the local school district to be involved directly in the planning of a cooperative. The more the community and state are informed and involved in planning the better able they will be to help support the program, especially if they later will have to

approve or supply financing of the cooperative. Lay citizens also should be on the cooperative planning board (Clothier and Swich, 1969; "Descriptive Design", 1971; Hughes et al, 1971; Hughes et al, 1972; Rollins, May 1976; Rollins, September, 1976; Rollins, 1977; Schmidt, 1975; Shaars, 1971; "Shared Services", 1971; Zorn, 1973).

Adequate financing of cooperatives is very important. Hughes et al. (1972, p 64,) mention in their study that without state funding, or at least state matching funds, local cooperatives may find it difficult to operate, especially since most cooperative programs are expansions, "add-ons", or improvements of current school programs. Through expansion of services school districts, through cooperative arrangements, can have programs they could previously not afford. Consequently, it is very hard to show in some cases whether or not a cooperative is really cost-effective (Hughes et al, 1972, p. 64). Research supports the fact that cooperatives are useful, but without state or community financial support cooperative arrangements are very difficult to start and to maintain. If state departments of education want school districts to start cooperatives, they will have to stimulate the effort by at least offering some initial financial help to get "the ball rolling" (Beaulieu and Colt, 1979; "Cooperative Services," 1974; "Educational Opportunities", 1973; Hughes et al, 1971; Hughes et al, 1972; "Innovative Practices",

1969; "Regional", 1967; Rollins, 1977; Rollins and Larsen, 1976; Shaars, 1971; Schmidt 1975. Rollins et al, September 1976; Rollins (April, May 1976, and April 1977), these writers felt that schools participating in a cooperative program or organization should be assessed on a per pupil cost basis. In this way every member of the cooperative will be charged fairly on their usage of the cooperative service.

Hughes et al, (1972, p.63) noted in their study that formal arrangements, when dealing with cooperative endeavors, seem to develop faster and to be stronger and much more effective than informal arrangements. Beaulieu et al (1979, pp 14-15) and Simkin (1970, pp. 28,29) agree that it is important to set goals and directions before actual cooperative activities can take place. Clear rules and regulations must be established so that all members of a cooperative understand the requirements for participation Rollins et al (1976; Rollins, April, May 1976, April 1977) suggested that the bylaws of a cooperative should contain: 1) name and principal officer of the cooperative; 2) statement of purpose; 3) membership of the cooperative; 4) schedule of meetings; 5) powers, duties, number and election of officers, rules, meetings, and quorum needed; 6) committees; 7) fiscal procedures; 8) indemnification of directors; 9) amendments or repeal of amendments; and 10) parliamentary authority. Beaulieu et al (1979) feel that it is very important to have one person who is in charge and

capable, willing and able to provide the organizational work necessary to initiate and maintain a program.

Forsythe and Hardin (1969, pp. 30-31) listed twenty steps to follow in organizing a cooperative:

1. To form a cooperative purchasing organization, the executive leaders of the school districts should first meet to determine the extent of interest.

2. The school districts of a cooperative should be in proximity to each other.

3. Attorneys for the school districts should determine the legality of forming a cooperative purchasing organization.

4. The board of education of each school district should give its approval to the formation of a cooperative purchasing organization.

5. The board of education or the superintendent should designate a representative to the cooperative purchasing organization.

6. The aforementioned representatives from each school district would become the cooperative purchasing board.

7. Prior to establishing purchasing policies and procedures, the cooperative purchasing board should consult personnel who are actively engaged in cooperative purchasing.

8. The cooperative purchasing board should elect a president or chairman who should be responsible for the coordination of the cooperative's business transactions.

9. The cooperative purchasing board should, as it deems necessary, elect other officers to assist the president in the operation of the cooperative.

10. When board membership is too large to operate effectively, committees should be formed and their respective duties clearly defined.

11. None of the members of the cooperative purchasing board or its committees should receive any remuneration for their services to the organization.

12. The cooperative purchasing board should write and adopt a constitution and bylaws to govern its operation.

13. Minutes should be kept of the meetings of the cooperative purchasing board and its committees.

14. The cooperative purchasing board should adopt a procedure for admitting new members.

15. If state law does not prohibit it, membership in the cooperative purchasing organization should be open to the agencies of city and county governments.

16. If state law does not prohibit it, membership in the cooperative purchasing organization should be open to parochial schools.

17. The cooperative purchasing organization should not permit non-members to purchase through the cooperative.

18. The participating members should agree on the basis for paying expenses which arise directly from the operation of

the cooperative purchasing organization.

19. The cooperative purchasing board should adopt a calendar for regulating the business transactions of the cooperative.

20. After its formation, the organization should call a meeting of the vendors and explain the purposes and policies of the cooperative.

Once a cooperative is organized there are four criteria that can aid districts which are faced with the question of deciding which program/services to provide.

1. The program(s) selected should bear a logical relationship to previously identified educational needs.

2. These programs/services should work best at a regional level of operation because of the economics of large scale purchasing or the need to distribute resources more evenly.

3. It should have a reasonably good chance of obtaining long term funding.

4. It should be continued only if evaluation shows it to be cost effective in comparison with the alternatives ("Shared Services", 1971, p.10).

Membership in an educational cooperative usually is composed of contiguous school districts whose governing boards agree to join in a cooperative effort to attack common educational problems.

Two types of membership are provided:

A. Unitary members are those school districts located within a single planning and development district as defined by an appropriate state agency.

B. Contractual members are those school districts located outside of a planning and development district but which are invited to join the cooperative.

Conditions of membership in a cooperative are defined by a board of directors. The number of members admitted to a cooperative usually will be decided by the members of the planning group ("Descriptive Design, 1971, p. 8).

Shaars (1971, p. 88) and Hughes et al (1971, p 180) agree that school districts which are in close proximity and are socioeconomically similar seemed to function well in a cooperative arrangement. The more equivalent the systems the better the cooperative arrangement will be perhaps because they both have similar needs.

A cooperative can initiate any program it wants as long as there is a need, and the facilities are available somewhere within the cooperative area. Clothier et al (1969) suggest that cooperatives may want to share in the training and education of teachers and staff. Knudson (1972) proposes that cooperative groups can share facilities, staff (such as reading teachers) and teacher training facilities. They also can share programs in early childhood development and special education. In addition to the above, Worsham suggests potential coopera-

tive programs in occupational education. This is already being done in the Boston metropolitan area. Rollins (May 1976, p 25, April 1977, p 21) suggests that cooperatives might also offer programs in continuing education, alternative schools, the gifted and talented, and might cooperate in the development of a diagnostic/prescriptive center. Obviously, any need which is identified by the cooperative group can be developed into a program. A study, completed in 1967, identified cooperative programs in seven states which included shared programs and services in virtually every academic area ("Regional Educational").

Successful educational cooperatives seem to have a number of things in common. They receive either state funds, state matching funds, or strong financial support from their respective communities and they must be willing to cooperate and to compromise (Beaulieu et al, 1979, pp. 14-15; Hughes et al 1972, p. 64). Strong leadership and a commitment to the task are also seen as essential components of a successful cooperative program ("Community School Services", 1967, p. 14).

Despite these optimistic reports, there appear to be some disadvantages to forming a cooperative. Zorn (1973, pp. 42-43) pointed out that a problem cooperatives have who buy their supplies in bulk is the need for a large central distribution center for the materials. Often one is not available, so that the advantages of buying in bulk is lost. Forsythe et al.

(June 1969) noted the following disadvantages to cooperative buying:

1) It establishes only one quality level of an item.

2) It removes the user from decision making.

3) It tends to eliminate the small local bidder.

4) Local control is lost.

5) It could result in delayed deliveries.

6) There could be a storage problem.

7) There could be a loss of service, because the salesman would not be around.

Despite these disadvantages, of which the storage facility is the only difficult problem, there seems to be a definite future for cooperative programs. As inflation rises more and more communities and school districts will be looking for alternatives to eliminating or reducing programs. Establishing cooperative programs is one of those feasible alternatives.

Organizing a Cooperative Transportation Program

The literature on cooperative transportation programs is very limited and mainly directed toward out-of-district transportation. Trudeau reported in 1973 (pp. 1-2) that over 30% of the states specifically provided out-of-district transportation. In 1974, Bayliss proposed a regional school transportation program for nine communities located northwest of Boston, Massachusetts. These schools were involved in transporting students outside of their home district. Bayliss

projected that these school districts, based on his proposal, would save up to 24% of the yearly per pupil transportation cost (pp 17, 25).

Two school districts and a parochial school in the St. Louis area organized a cooperative and are now sharing the same bus fleet. Each school has established a different starting time and dismissal time. This enables them to share the costs of one fleet of buses and not reduce services ("Schools Team Up", 1976). According to Rollins and Larsen, (1976) three Rhode Island communities use mini-buses to transport their special education students out-of-the-district to their special schools (pp. 14, 19).

Booz, Allen, and Hamilton completed a study in 1976 designed to provide school districts with a more efficient, cost effective, and feasible approach to shared transportation services. They suggested that the following steps be followed:

1) Forecast the number of students likely to be identified as needing special education.

2) Determine the facilities which will be needed to provide the necessary special education program.

3) It may be possible to provide a regional center for some programs.

4) Evaluate the desirability and cost efficiency of hiring a private contractor to transport all special education kids, within the district, who must attend schools outside of the

district.

5) Analyze the total operating cost and per unit costs of contracting for the transportation of all students on a cooperative basis.

6) Negotiating a contract for several districts rather than on an individual basis with the transportation company.

7) Institute regular meetings for transportation supervisors. The purpose of these meetings will be to investigate the possibility of forming a transportation cooperative (pp. 27-28).

It is important that districts, before establishing an out-of-district transportation cooperative, compare the costs involved in the present transportation program.

If a cooperative system is less expensive or more desirable, Booz et al. (1976) recommend that the following requirements be met.

1) Agreement by two or more districts to transport students through a cooperative transportation program.

2) Develop goals and objectives for a cooperative transportation program.

3) Development by the cooperative council of standardized regulations and procedures.

4) Designation by the council of one individual responsible for the coordination of the program.

5) Designation by each superintendent for the administration

of the program in respective districts.

6) Determination by the council of the number of students to be involved in the program.

7) Development by the council of an inventory list.

8) Development of a routing and scheduling system.

9) Development of equipment lists.

10) Identification of manpower needs.

11) Development of fuel purchasing arrangements.

12) Development of a financing method (pp. 24-26).

There are some problems inherent in an out-of-district transportation cooperative, especially when transporting special education children. They may need special buses, which might mean a limit on the number of students who can be transported by that vehicle. Some special education children with emotional problems can be adversely affected if they must travel with mentally retarded children (Bayliss, 1974, p.13). An increase in the number of stops to pick up additional children can also increase the travel time (Bayliss, 1974, p. 13; Booz et al, 1976, pp 26-27; Rollins et al, 1976, pp.19-20). This means that the transportation of special education children is a complicated process and should be studied thoroughly before any program is initiated on a cooperative basis. Other out-of-district transportation, such as to parochial or regional vocational schools, would seem to be less complicated and easier to implement.

Beaulieu (1980) made the following recommendations concerning out-of-district transportation:

1) Encourage school committees to enter cooperative arrangements with other districts for out-of-district transportation.

2) Explore the feasibility of establishing a state-operated school transit authority for out-of-district transportation.

3) Explore the feasibility of assigning responsibility for out-of-district transportation to the Rhode Island Public Transit Authority.

4) Explore the possibility of expanding special education on a regional basis (pp. 7-9).

There is a need for some kind of alternative method of transporting students to out-of-districts schools. The possibility of forming a cooperative arrangement for out-of-district transportation needs to be studied further.

III. Methods

Subject

The North Smithfield, Woonsocket, Cumberland, and Lincoln, Rhode Island school district out-of-district transportation practices will be examined and analyzed.

These four districts were chosen because of their close proximity to each other and because of the main roads which intersect their boundaries. These roads help make access to these towns very easy.

Variables

Because this is a feasibility study no variables are manipulated.

Hypotheses

The following hypotheses will be offered:

1) School systems, under study will be able to show at least a 10% savings in out-of-district transportation costs by forming a transportation cooperative.

2) School systems under study, by forming a partial transportation cooperative, will be able to show some savings in out-of-district transportation costs.

Procedure

A letter will be sent to the four school districts explaining the feasibility study and asking them if they would like to participate in this project. (See Appendix D)

A questionnaire will be developed to gather the out-of-district transportation data from each participating school district.

When the school systems agree to participate in the study, a letter of acknowledgement will be sent to them. Included in this letter will be the questionnaire which they will fill out and return. It will be possible, if the school district does not have the time to collect the data, for this investigation to gather the data from district records, if they so request.

Participating school districts will be requested to apply to the R.I. State Department of Education for a $2500 grant, set aside by the Board of Regents in their January session of 1980. These funds are available to school districts interested in planning and designing a school transportation cooperative with other adjacent school districts. This will help the school systems involved in this project to complete this study and to organize a cooperative.

After the data are collected they will be organized, tabulated, and analyzed. This will provide a picture of the out-of-district transportation program of each district. The results will be examined to see if there are any alternatives available to the current method of transportation. This investigation will then attempt to readjust the routes and schedules of out-of-district transportation to facilitate the formation of a cooperative so that by sharing services, and forming an out-of-district transportation cooperative the districts will be able to show a savings in their out-of-district transportation costs. Charts will be utilized to show the differences between the current system of transportation and the suggested alternatives assuming that there are differences.

Based on the results of this study, suggestions and recommendations will be made to help the school districts improve their out-of-district transportation program.

A final report will be sent to each of the districts.

The cost of this project will be approximately $500 dollars.

IV. Results

In the Spring of 1981, questionnaires were sent to each of the four school districts involved in the study. This was followed by a series of meetings with the transportation directors or business managers to further explain the questionnaire and to collect the data. Each school district was also asked to jointly apply for a grant from the Rhode Island Department of Education designed to aid school systems in the formation of cooperative planning groups. Mr. Richard Charland, Business Manager of the Cumberland School System, agreed to act as the grant manager.

Anthony Paglione, Special Education Transportation Director for Woonsocket, Lawrence Masse, Business Manager for North Smithfield, Edward Driscoll, Business Director for Lincoln, Stanley Nawrocki, Assistant Superintendent for Cumberland and Richard Charland, Business Manager for Cumberland, were all able to provide the necessary information for their respective systems' out-of-district transportation programs which are listed on the following pages, and in Appendices A and B.

A. Cumberland

Cumberland currently is sending seven buses out of its school district to other schools in the state. One mini-bus owned by the town is used to transport eight students to the Bishop Keough parochial school in Pawtucket. Two buses are used to send 92 students to the Woonsocket Vocational facility

for two hours in the afternoon and one mini-bus is used to transport eight students to the Davies Vocational facility in Lincoln. Four town-owned mini-buses are used to transport the special needs students to their schools throughout the state.

The total cost for their out-of-district transportation program is approximately $58,221.00 a year. The daily round trip mileage for this program is approximately 500 miles. Cumberland provides out-of-district transportation for 134 pupils.

B. Lincoln

The Lincoln school district is currently sending five buses out of their school district to other schools in the state. One bus is used to transport 21 students to the Bishop Keough and Woodlawn Regional schools in Pawtucket, and the Solomon Schecter school in Providence. Four mini-buses are used to send 15 special needs students to their schools throughout the state. The total cost for Lincoln's out-of-district transportation program is approximately $150,351 per year. The town transports a total of 40 students. The total daily round trip mileage is approximately 328 miles.

C. North Smithfield

The school district of North Smithfield currently sends ten buses and two taxi cabs to other schools outside of their district. Two buses and one mini-bus are used to send four students to parochial schools in Woonsocket. North Smithfield

sends two buses and one mini-bus to the vocational facilities in Cumberland, Lincoln, and Woonsocket. They send the remaining buses and two cabs to special needs schools in other parts of the state. The town transports a total of 158 students. The daily round trip mileage is 270 miles. For this out-of-district transportation the total cost is approximately $38,700.

D. Woonsocket

Woonsocket school district currently sends six buses to schools out of the district. One bus goes to Davies Vocational school in Lincoln carrying twenty-three students. The other five buses carry twenty-two students to special needs schools throughout the state. The school transports a total of 45 students. The total daily round trip mileage is approximately 205 miles per day. For this out-of-district transportation the total cost is approximately $48,060.

It should be noted that most systems use their bus fleets not only to transport students to out-of-district schools but also to transport students within their district. In most cases, out-of-district buses share the cost with the in-town service, so it is very difficult to get an exact cost for a specific bus route. Hence all of our cost figures are approximated.

Here is a brief summary of each district's out-of-district transportation program:

	No. of Pupils	No. of Vehicles	Total Daily Mileage	Total Cost (Approximate)
Cumberland	134	7	500	$ 58,221
Lincoln	40	5	328	150,351
North Smithfield	158	12	270	38,700
Woonsocket	45	6	205	48,060

It is obvious that there is a wide disparity in the figures between the four districts. Woonsocket and Lincoln each have vocational schools within their districts, so there are fewer students being transported to vocational schools outside of the district. Woonsocket has a number of parochial schools within its borders and therefore, does not need to provide out-of-district transportation for parochial students.

There is also a great difference in the cost of transportation between the Lincoln school district and the other districts because Lincoln leases more of its transportation services.

On the next page there is a chart showing the difference out-of-district schools to which the students are sent. The distribution of students from each school district attending these schools is also indicated. This information will help to formulate a plan for a cooperative transportation program, by showing which schools send students to the same schools.

The cooperative should also consider which out-of-district schools are adjacent or on the same route as other schools to

which children are transported. Many districts now, as seen in their transportation schedule, transport students to a number of different schools along the same route and in the same bus.

Following is a list of districts which transport children to the same schools.

MATCHES BETWEEN TWO TOWNS

School	Town No. of Students	Total
1. Ella Risk School, C.F.	Lincoln 2, N. Smithfield 1	3
2. F.B. Sargeant Rehab. Center, Providence	Lincoln 1, Woonsocket 15	16
3. Governor's Center, Providence	Cumberland 1, Lincoln 1	2
4. Meeting Street School, East Providence	Cumberland, 4, Lincoln 4, Woonsocket 2	10
5. Old County Road School, Smithfield	Cumberland 1, Lincoln 1,	2
6. Regional Center Cumberland Monastery	Lincoln 2, N. Smithfield 5	7
7. R. I. School for Deaf Providence	Cumberland 5, Lincoln 2, Woonsocket 2	9
8. Davies Vocational, Lincoln	Cumberland 8, North Smithfield 5, Woonsocket 23	36
9. Bishop Keough, Pawt.	Cumberland 8, Lincoln 20	28
10. Vocational Resources, Woonsocket	Cumberland 4, Woonsocket 2	6

Many out-of-district schools are servicing only one or two children each, from the four districts. These schools or centers are:

School	Home District
The Behavior Development Center Mount Hope Avenue, Providence	Lincoln 1 Student
Bradley Hospital East Providence	Woonsocket 1 Student
Burriville High School Burriville	North Smithfield 1 Student
Flora Curtis School Pawtucket	North Smithfield 1 Student
Fogarty Hospital Woonsocket	North Smithfield 2 Students
Harmony Hill School Gloucester	Cumberland 1 Student
Learning Center Blackstone Blvd., Providence	North Smithfield 1 Student
Northern R.I. A.R.C. Woonsocket	Cumberland 5 Students
Rhode Island Hospital Providence	Cumberland 1 Student
Smithfield Jr. High Smithfield	Cumberland 3 Students
Windmill Street School Providence	Cumberland 1 Student
Woonsocket Workshop Woonsocket	Lincoln 1 Student
Cumberland Culinary Cumberland	North Smithfield 6 Students
Catholic Regional Woonsocket	North Smithfield 8 Students
Solomon Schecter School Providence	Lincoln 1 Student
Woodlawn Regional School Pawtucket	Lincoln 1 Student

Since many of these schools or centers are in the same areas it would be convenient to have a single bus stop at each school to reduce costs.

Obviously the most ideal plan is the one that meets all the needs of the transportation program and significantly reduces cost. But there are other considerations. Students should not be required to travel more than an hour on their bus. Students with special needs should still be picked up and dropped off at their homes. Some buses will also need to have wheelchair facilities. Buses should also be scheduled to travel to a number of different schools located in the same area. But the problem is how to pick up all the children from the four areas, get them on to the proper buses and deliver them to their schools without taking an inordinate amount of time. One method might be to use a single pickup and delivery area. Students who are attending schools in the Providence area could all meet at a central staging area and travel on one bus to their schools. In other cases, as a school bus travels through another town it might pick up some of the students from that town. There are a number of possible plans to facilitate an out-of-district transportation cooperative.

Plans to be proposed are based on the following recommendations:

1. That the local school district will transport its out-of-district school children to a central pickup point in their town. Time will be saved by not having to pick up and

deliver students directly to their homes. Each school district also provides transportation within the town to the local schools. Children traveling to schools out of town would simply take a school bus to their pickup point.

2. That the pickup point will provide adequate access and egress for a school bus. The bus must be physically able to collect the children at their pickup point.

3. That the pickup point be located relatively close to either routes 146 or 295. Since these will be the main travel routes out of town, it will save time if the pickup points are located as clearly as possible to either of these two highways.

4. That the pickup point should be a school or an area where there is shelter from inclement weather. Hopefully the transfer time to the buses will be short, but with New England weather it is better to be prepared.

5. That the time schedules be determined by the school districts involved. The school systems will be better able to determine the time necessary once the routes have been run during the first week of school.

V. Presentation of Plans

The following plans are offered to facilitate the formation and use of an out-of-district transportation program. The three plans (A, B, C) are spelled out over the next eleven pages.

PLAN A

Route 1 Mini Bus

Students From	To
1 North Smithfield	Ella Risk School, Central Falls
1 North Smithfield	Flora Curtis School, Pawtucket
2 Lincoln	Ella Risk School, Central Falls

Bus picks up North Smithfield students. Travels 146 to Fogarty Hospital, drop off two students. Proceed to Lincoln to pick up two students for Ella Risk School in Central Falls. Proceed to schools in Central Falls and Pawtucket.

Total: 6 Students

Route 2 Bus

Students from	To
5 North Smithfield	Davies Vocational, Lincoln
1 North Smithfield	Behavior Develop. Ctr., Providence
23 Woonsocket	Davies
2 Woonsocket	R. I. School for Deaf, Providence
8 Cumberland	Davies

Bus picks up North Smithfield students. Travel 146 to Park Square, pick up Woonsocket students. Travel to Manville Hill Road to Mendon Road to Cumberland High School. Pick up Cumberland students. Proceed on 295 to 146 to Davies. Davies students depart, other students remain on bus and travel south on 146 to schools in Providence.

Total: 40 students

(Plan A continued)

Route 3 Bus

Students from	To
5 Cumberland	R. I. School for Deaf, Providence
8 Cumberland	Bishop Keough, Pawtucket
20 Lincoln	Bishop Keough, Pawtucket
4 Lincoln	Woodlawn Regional, Pawtucket
1 Lincoln	Solomon Schecter, Providence
2 Lincoln	R. I. School for Deaf, Providence

Bus picks up Cumberland students at high school on Mendon Road, proceeds down 116 to Lincoln High School and collects children. Proceed down Smithfield Avenue to Bishop Keough. Proceed to 95 South and travel to School for Deaf. Re-enter Route 95 and travel to Woodlawn Regional School.

Total: 40 Students

Route 4 Mini Bus

Students from	To
15 Woonsocket	F. B. Sargeant Rehab., Providence
1 Cumberland	Governor Center, Providence
1 Lincoln	Governor Center, Providence
1 Lincoln	F. B. Sargeant Rehab., Providence
1 Lincoln	Behavior Development, Providence

Bus picks up Woonsocket students at High School proceeds down Mendon Road south to pickup student at Cumberland High School. Bus travels down to Route 116 and proceeds to Lincoln High School, picks up two students and then onto route 146 south to Providence.

Total: 18 Students

(Plan A continued)

Route 5 Mini-bus w/wheelchair facility

Students from	To
1 Woonsocket	Bradley Hospital, East Providence
2 Woonsocket	Meeting Street School, East Providence
4 Cumberland	Meeting Street School, East Providence
4 Lincoln	Meeting Street School, East Providence

Bus collects Woonsocket students at high school and travels down Mendon Road to Cumberland High School. Collects Cumberland students and proceeds down Mendon Road to Route 116. Bus picks up students at Lincoln High School and then travels on Route 146 to 195 to East Providence.

Total: 11 Students

Route 6 Mini-bus

Students from	To
1 Lincoln	Woonsocket Workshop
5 Cumberland	Northern R.I. A.R.C., Woonsocket

Bus picks up Lincoln student at home and goes to Cumberland High School to pick up Cumberland students and travels north on Mendon Road to Woonsocket Schools.

Total: 6 Students

Route 7 Mini-bus

Students from	To
2 Woonsocket	Vocational Resources, Providence
4 Cumberland	Vocational Resources, Providence
1 Cumberland	R. I. Hospital, Providence
1 Cumberland	Windmill Street School, Providence

Route 7 (Plan A continued)

Bus picks up Woonsocket students at Woonsocket High School and continues south on Mendon Road to Cumberland High School. The bus picks up Cumberland students here and proceeds south on Mendon Road to Route 295. Travels west on Route 295 to Route 146 Exit. Proceeds south on 146 to Providence.

Total: 8 Students

Route 8 Mini-bus

Students from	To
3 Cumberland	Smithfield Jr. High, Smithfield
1 Cumberland	Old Country Road School, Smithfield
1 Cumberland	Harmony Hill School, Glocester
1 Lincoln	Old Country Road School, Smithfield

Bus picks up Cumberland students at High School on Mendon Road and proceeds down Mendon Road to Route 116. The bus picks up one student at Lincoln High School and continues down Route 116 to Smithfield and Glocester.

Total: 6 Students

Route 9 Mini-bus

Students from	To
5 North Smithfield	Regional Center, Cumberland
2 Lincoln	Regional Center, Cumberland

Bus picks up five students from North Smithfield High School proceeds to 146 South to Lincoln. There the bus picks up 2 students at Lincoln High School and takes Route 116 East

Route 9 (Plan A continued)

to Mendon Road. From Mendon Road the bus will travel to Angell Road and follow to Diamond Hill Road to the Regional Center.

Total: 7 Students

At this time, there is no possibility of cooperating on transportation with students going to the following schools because there are no other school districts transporting students to these locations.

1. Burrillville High School - one North Smithfield student.
2. Our Lady Queen of Martyrs - 61 North Smithfield students
   5 North Smithfield students Kindergarten students
3. Catholic Regional - 8 North Smithfield students

The following schools are omitted because of their time schedules:

1. Cumberland Culinary - 6 North Smithfield students (morning only)
2. Woonsocket Vocational - Cumberland students 92 (afternoon only
3. Fogarty Hospital - North Smithfield students 2

TOTAL BUSES FOR PLAN A: 11 Mini-buses and 4 Buses.

Plan B

Route 1 Mini Bus

Same as Plan A

Route 2 Bus

Same as Plan A except the 2 children for R. I. School for the Deaf from Woonsocket, the child traveling to the Learning Center in Providence and the child traveling to the Behavior Development Center in Providence, both from North Smithfield, will stop at Davies Vocational School and transfer to the Route 3 Bus.

We will also add on this bus the five North Smithfield children going to the Regional Center in Cumberland, formerly on Bus Route 9 of Plan A. This Route 2 bus, after delivering the students at Davies will pick up the two Lincoln children going to the Regional Center in Cumberland and drop them there.

Students from	To
5 North Smithfield	Davies Vocational, Lincoln
1 Lincoln	Learning Center, Providence
1 North Smithfield	Behavior Develop. Ctr., Providence
5 North Smithfield	Regional Center, Cumberland
23 Woonsocket	Davies Vocational, Lincoln
2 Woonsocket	R. I. School for Deaf, Providence
	Total: 37 Students

The two students from Woonsocket for the R. I. School for the Deaf, the two students for the Behavioral Development

Route 2 (Plan B continued)

Center and the Learning Center from North Smithfield will transfer to Bus Route 3.

The five students for the Regional Center in Cumberland from North Smithfield will remain on Bus Route 2 and pick up the two students from Lincoln going to the same destination, now Route 2A.

Route 2A

Students from	To
5 N. Smithfield/Davies	Regional Center, Cumberland
2 Lincoln/Davies	Regional Center, Cumberland
	Total: 7 Students

Route 3 Bus

The 8 students from Cumberland for Davies will be added to this bus from Route 2 bus.

This bus will pick up the two students from Woonsocket for R. I. School for the Deaf, and the two students for the Learning Center and the Behavioral Development Center in Providence from the Route 2 bus which had dropped them off at Davies.

The Lincoln students who were picked up at the Lincoln High School will now be picked up at Davies also.

Students from	To
8 Cumberland	Bishop Keough, Pawtucket
5 Cumberland	R. I. School for Deaf, Providence
8 Cumberland	Davies Vocational, Lincoln

Route 3 (Plan B continued)

20	Lincoln/Davies	Bishop Keough, Pawtucket
4	Lincoln/Davies	Woodlawn Regional, Pawtucket
1	Lincoln Davies	Solomon Schecter, Providence
2	Lincoln/Davies	R. I. School for Deaf, Providence
2	Woonsocket/Davies	R. I. School for Deaf, Providence
1	N. Smithfield/Davies	Learning Center, Providence
1	N. Smithfield/Davies	Behavioral Development Ctr., Providence

The bus from Cumberland to Davies will contain 21 students. The bus from Davies to Pawtucket and Providence will contain 45 students.

Total: Students 21/45

Route 4 Mini-bus

Same as Plan A except that the student for the Governor Center from Cumberland will be transferred to the bus on Route 7.

Total: 17 Students

Route 5 Mini-bus

Same as Plan A

Route 6 Mini-bus

Same as Plan A

Route 7 Mini-Bus

Same as Plan A except add one student from Cumberland going to the Governor's Center in Providence.

Total: 9 Students

(Plan B continued)

Route 8 Mini-bus

Same as Plan A

Route 9

Eliminated

TOTAL BUSES PLAN B: Mini-Buses 9*, Buses 4*.

*includes buses from Cumberland and N. Smithfield which were not possible to include in the cooperative.

Plan C

Route 1 Mini-bus

Same as Plan A

Route 2 Bus

Students from	To
1 North Smithfield	Learning Center, Providence
1 Lincoln	Behavior Develop. Ctr., Providence
2 Lincoln	R. I. School for Deaf, Providence

North Smithfield mini-bus picks up student at home and proceeds to Lincoln on 146 to pick up student at high school. Then travels to Providence on Route 146.

Total: 4 Students

Route 2B Mini-bus

Students from	To
8 Cumberland	Davies, Lincoln

Mini-bus picks up Cumberland students at Cumberland High School, proceeds down Mendon Road to Route 295 South to 146. Take 146 to Davies Vocational exit.

Total: 8 Students

Route 3 Mini-bus

Students from	To
8 Cumberland	Bishop Keough, Pawtucket

The mini-bus will pick up students at Cumberland High School and proceed down Mendon Road to Smithfield Avenue to Bishop Keough.

Total: 8 Students

(Plan C continued)

Route 3A - Bus

Students from	To
20 Lincoln	Bishop Keough, Pawtucket
4 Lincoln	Woodlawn Regional, Pawtucket
1 Lincoln	Solomon Schecter, Providence

The bus will pick up all students at Lincoln High School and proceed to 146, exit at the Mineral Spring Avenue exit to Bishop Keough on Smithfield Avenue then proceed to Woodlawn Regional. Then the bus gets onto Route 95 to Solomon Schecter school.

Total: 25 Students

Route 3B - Mini-bus

Students from	To
2 Woonsocket	Vocational Resources, Providence
2 Woonsocket	R. I. School for Deaf, Providence
5 Cumberland	R. I. School for Deaf, Providence
4 Cumberland	Vocational Resources, Providence

The mini-bus will pick up the Woonsocket students at Woonsocket High School and proceed down Mendon Road to Cumberland High School where the Cumberland students will be picked up. The bus will then travel to 295 South and exit onto 146 South to Providence.

Total: 13 Students

(Plan C continued)

Route 4 Mini-bus

Students from	To
15 Woonsocket	F.B. Sargeant Rehab., Providence
1 Lincoln	F.B. Sargeant Rehab., Providence

The mini-bus will pick up the Woonsocket students at a convenient point in Woonsocket and proceed on 146 Lincoln to pick up the one Lincoln student and then proceed into Providence.

Total: 16 Students

Route 4A Mini-bus

Students from	To
1 Cumberland	Windmill St. School, Providence
1 Cumberland	R. I. Hospital, Providence
1 Cumberland	Governor's Center, Providence
1 Lincoln	Governor's Center, Providence

The mini-bus will pick up the Cumberland students at the high school on Mendon Road and proceed to pick up the Lincoln student either near his home or at Lincoln High School. The bus will then proceed down Route 146 to Providence.

Total: 4 Students

Route 5 Mini-bus

Students from	To
1 Woonsocket	Bradley Hospital, East Providence
2 Woonsocket	Meeting St. School, East Providence

The mini-bus will pick up the three students at their homes in Woonsocket. The bus will then travel down Route 146

Route 5 (Plan C continued)

to Route 93, and from there to Route 195, and on to East Providence and the two schools.

Total: 3 Students

Route 5A Mini-bus w/Wheelchair Facility

Students from	To
4 Cumberland	Meeting St. School, East Providence
4 Lincoln	Meeting St. School, East Providence

The students from Cumberland and Lincoln might be able to be picked up at their homes if there is time. If there is not enough time then the students will be picked up at a convenient place in their towns and travel down Routes 295, 146, 95, and 195 to their school in East Providence.

Total: 8 Students

Route 6 Mini-bus

Same as Plan A.

Total: 6 Students

Route 7 Eliminated

Route 8 Mini-bus

Same as Plan A.

Total: 6 Students

Route 9 Mini-bus

Same as Plan A.

Total: 7 Students

Total Buses Plan C: Mini-Buses 17* - Buses 4*

*includes buses from Cumberland and North Smithfield which were not possible to include in the cooperative.

VI. Discussion of Plans

Here is a brief comparison between the total number of vehicles used in each plan and the existing out of district transportation program.

	Existing	Plan A	Plan B	Plan C
No. of vehicles	30	16	14	20
% Change from Existing		47%	54%	34%

From this brief summary it appears that Plan B and Plan A seem to offer the greatest savings in bus usage, but there are other factors to be considered. For example how does this program affect the out-of-district transportation in each of the individual districts? If there is a 54% decrease in total bus usage, would that same percentage hold true in each town? Would there also be a 54% decrease in out-of-district transportation costs? This next section will examine the impact of the three plans on each of the individual school districts.

The figure of 54% change in bus usage for Plan B is, of course, an average amount. The breakdown of the change in bus usage under each plan is included below for each district. This figure was obtained by finding the percentage of bus usage for each district in each route and adding the percentage together to get the total bus usage. (See Appendix C.) For example the Lincoln school district might have used 2% of a bus on one route and 83% of a bus on another route. To find out the total bus usage for Lincoln you would total all of

those percentages for Lincoln. These of course reflect the sharing of the bus by the various districts.

Total Bus Usage for each of the Cooperative Plans

Town	Exist.	Plan A	% Dif.	Plan B	% Dif.	Plan C	% Dif.
Cumberland	7	5.35*	24%	5.19*	26%	7.6*	108%
Lincoln	5	2.33	53%	1.94	62%	3.69	26%
N. Smithfield	12	6.36*	47%	5.82*	52%	6.64*	45%
Woonsocket	6	1.95	68%	2.04	66%	3.07	47%
Total	30	15.99		14.99		21.00	

*includes out-of-district transportation from these areas which were not possible to include in the cooperative plan.

The chart indicates that under Plans A and B the lowest change was shown in bus usage by the Cumberland school system. Cumberland and Smithfield transport the largest group of children, and use the greatest number of buses. Each of these systems also has buses to which they cannot have co-operative ventures with the other school districts in the study. This fact tended to increase the number of buses used in each case, for Cumberland it represented an additional two buses, and for North Smithfield an additional four buses. This factor does make a difference in determining the percentage of possible change.

The chart, however, does give some indication as to the potential savings one might expect from a cooperative venture such as this. Even though under Plan C, Cumberland did show an increase in bus usage under the other two plans a 24% to

to 26% change in bus usage is a substantial difference.

Can we extrapolate from this point to suggest that this 24% decrease in bus usage also means a 24% decrease in the cost of this transpoetation? Unfortunately not, since there is no way of predicting, without actually putting the plan into effect, what amount of money would be saved. This study however, has been able to show that most of the buses and routes can be shared by the other districts. So, as using the bus to the Meeting Street School as an example, if Lincoln and Cumberland were to share that bus, as suggested in Route 5A of Plan C, Cumberland could probably reduce the cost of the bus transportation to Meeting Street School, now $16,387, by possibly one-half. Lincoln's present cost of transporting students to Meeting Street School is now approximately $16,800; it too might be able to reduce this expense by a half. By sharing a bus to the Ella Risk School in Central Falls, as suggested in Route 1 Plan A, Lincoln could reduce its cost, now $12,375, and North Smithfield could reduce its cost, now $35 per day, by approximately one-half.

So despite the fact that we cannot show in all cases the potential savings or expenses, it is possible to interpret and to ascertain the potential benefits of a cooperative transportation program by examining the present situation and the proposed alternatives.

There are also other factors which affect the ability to

show exact transportation costs. For example many of the children attending special schools require that aides be present on the bus to attend to their needs and to facilitate the child's entering and leaving the bus. Since it is not always possible to determine which child needs this service and which do not, the number of aides on the bus affects the total capacity of students able to be placed on the bus, hence some of the bus routes may not be feasible for that reason. There are also possible conflicts between children riding in a bus together which might preclude the advisability of their traveling together. These children might have social or physical problems which can affect the type of transportation necessary for them. Parents also might not want their children traveling with certain other children on the bus and might request a change to another bus. In some cases, while some schools might have similar starting times, they might not have compatible closing times; a number of schools in our study have this situation. (See Appendix A.) This would require additional bus trips in the afternoon, causing an increase in the cost of the transportation. Another problem is the transportation contracts each school district has with their bus company. Would the bus companies pick up students in other school districts? Because of the different contracts and companies involved, this matter should be investigated by the cooperative group. The cooperative may decide to contact their out-of-district transportation as a group rather

than as individual school districts. Or the cooperative may decide to use a school district's own buses and share the cost. While we can see these situations as potential areas of difficulty, we cannot predict when they might happen. Again we would only know when this cooperative program would be put into effect, and even then these situations, like the school population, constantly changes.

The most practical suggestion might be, then, to initiate a pilot program. Instead of accepting and instituting the entire plan in the 1981-82 school year, perhaps the school districts would consider cooperating on only a few of the routes. If these are cost effective, efficient, and successful, then the districts might consider instituting the whole program the following years.

VII. Pilot Program

The pilot program would consist of cooperating on the number of routes which are probably the easiest to implement and the most expensive to operate at present. In this way we might readily see a s vings on a cooperative effort. The suggested routes are:

1. Plan A - Route 1

The mini-bus which carries four children from Lincoln and North Smithfield to the Ella Risk School in Central Falls, and the Flora Curtis School in Pawtucket.

2. Plan A - Route 8

This is the mini-bus which would transport five Cumberland students and one Lincoln student to the Old Country Road School and Smithfield Junior High in Smithfield and the Harmony Hill School in Glocester.

3. Plan A - Route 5

This route would take three Woonsocket students, four Cumberland students, and three Lincoln students to Meeting Street School and Bradley Hospital in East Providence.

4. Plan A - Route 6

This route takes one Lincoln student and five Cumberland students to the Woonsocket Workshop and to the N. R. I. A. R. C. in Woonsocket.

5. Plan C - Route 2

This route takes five North Smithfield students and twenty-three Woonsocket students to Davies Vocational School in Lincoln.

These routes are reasonably easy to organize and implement. After trying this pilot program for a year the four districts will be better able to ascertain whether the cooperative transportation venture should be continued and expanded, or concluded.

VIII. Summary and Conclusions

The goal of this paper was to show that by forming an out-of-district transportation cooperative the four school istricts under study could save on their transportation costs. To this end two hypotheses were offered:

1. School systems under study will be able to show at least a 10% savings in out-of-district transpcrtation costs by forming a transportation cooperative.
2. School systems under study, by forming a partial transportation cooperative will be able to show some savings in out-of-district transportation costs.

While it is not possible, because of factors previously mentioned, to show an exact percentage of savings directly, it is possible to infer that a substantial decrease in bus usage for out-of-district transportation might also mean a substantial financial savings. Hypothesis one therefore cannot be proved at this point. However, if the four school districts do initiate the recommended pilot program then this hypothesis could be proved.

Hypothesis two, however, can be proved because it has already been demonstrated that by forming a cooperative and instituting one of the suggested plans one would see a substantial savings in bus usage. So therefore a savings is possible.

IX. Recommendations

To further aid the school districts involved in this study the following recommendations are offered:

1. Form a cooperative

   Because of increasing labor, maintenance, and fuel costs a small savings now could mean a larger savings later.

2. Institute the pilot program

   This is the only sure way to test the cooperative venture, and the groups might be able to save a substantial expense quickly and with relatively little effort.

3. Establish a uniform record keeping system

   By doing this, the cooperative will have easier access to the essential information necessary to coordinate the cooperative transportation program. This will also help the school districts to provide more exact information to their local school boards and to the Rhode Island State Department of Education.

4. Centralized Pickup Points

   Try to use centralized pick up points as often as possible. This will enhance the possibility of using the cooperative venture for more routes and it will also save time and money by using existing in-town transportation.

5. Encourage local support

   Parents and others who know what the school districts

are trying to do will be more cooperative and may help to facilitate the necessary changes inherent in the establishing and performance of the cooperative venture.

6. Alternate Forms of Transportation

Continue the use of taxi cabs, where cost efficient, and continue examining other alternatives. For example, it might be less expensive for a parent to transport their child to a school, where a cooperative venture is not possible, than to send a school bus. Greater effort must be made to find other responsible citizens in the area who might work in an area near a designated school. For example, there may be a teacher living in North Smithfield who teaches in Burrillville and who might be willing to transport the North Smithfield student to Burrillville High School for a reasonable fee.

7. State Transportation Authority

The four districts should consider asking the State Transportation Authority to further extend the public transportation routes into their districts. If this is accomplished then a great percentage of out-of-district schools might be able to take public transportation to their destinations. Even if the school districts were required to subsidize these students it would probably prove less expensive than providing their own buses.

8. Uniform start and end times for schools

The school districts should ask the out-of-district schools to aid them in their cooperative venture by establishing more uniform start and end times for their schools. In this way it would be easier for the cooperative to schedule routes, pickup times, and buses.

9. Increase the Cooperative Area

The school districts might consider expanding the cooperative area to include the Burriville and Smithfield School systems which were not part of the study. These areas might be able to help in those areas where the present group is not able to cooperate on certain routes and to certain schools.

10. Rhode Island School for the Deaf

The school districts might consider the possibility of working out an arrangement with the Rhode Island School for the Deaf which currently transports students from their facility in Providence to the Davies Vocational School in Lincoln on a daily basis.

11. Establish Regional Special Needs Schools

Because of the increasing costs of transportation it is reasonable to assume that at some time it might be less expensive to establish special needs schools within the four districts than to transport them out of the district. Especially when one considers that

many of the districts now have the room available in buildings or rooms no longer used because of the decreasing enrollment.

12. Form other Cooperative Ventures

The school districts might consider forming other cooperative ventures in the areas of bulk purchasing, sharing of staff, and computer purchase and use. Since the cooperative group will be already set up and the organization in place, this might be a reasonable extension of the cooperative's function.

The amount of effort to be expended by the cooperative is by no means insignificant. But in these inflationary times it is essential that school districts work together to offer programs and plans which are more efficient and cost effective. The formation of an out-of-district transportation cooperative is an important and viable method of achieving this end.

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Appendix A

CUMBERLAND OUT-OF-DISTRICT TRANSPORTATION OF SPECIAL EDUCATION STUDENTS

SPECIAL SCHOOLS ATTENDED	NO. OF PUPILS	HOW TRANSPORTED NOW	COST IF AVAILABLE	PUBLIC OWNED VEHICLE YES/NO
Government Med. Center	1	Mini Bus #44		Yes
Meeting Street School	4			
Windmill St. School	1			
R. I. Hospital	1		$16,387.	
R. I. School for Deaf	5	Mini Bus #45		Yes
Old County Road School	1			
Smithfield Jr. High	3			
Vocational Resources	4		18,687.	Yes
Northern RI Retarded Citizens Center	5	Mini Bus #40	7,347.	Yes
Harmony Hill School	1	Own Vehicle	3,300.	Yes

CUMBERLAND OUT-OF-DISTRICT TRANSPORTATION OF PAROCHIAL/PRIVATE STUDENTS

Bishop Keough	8	Mini Bus	1,500.	Yes

CUMBERLAND OUT-OF-DISTRICT TRANSPORTATION OF VOCATIONAL STUDENTS

Woonsocket	92	(2) Regular Bus	9,000.	No
Davies Vocational	8	Mini Bus #45	2,000.	Yes

CUMBERLAND OUT-OF-DISTRICT TRANSPORTATION OF SPECIAL EDUCATION STUDENTS

SPECIAL SCHOOLS ATTENDED	IF VEHICLE LEASED INDICATE CONTRACT EXPIR. DATE	ROUTE TAKEN	MILES PER ROUND TRIP	TIME SCHED./ COMMENT CAPACITY OF BUSES
Government Med. Center Meeting St. School Windmill St. School R. I. Hospital		Cumb. 123 to 146 to 95	160	7:15-9:00 2:00-3:00
R. I. School for Deaf Old County Rd. School Smithfield Jr. High Vocational Resources		Cumb. 116 146 5	170	7:15-9:00 1:30-4:15
Northern R. I. Retarded Citizens Center		Cumb. to 146	50	8:30:9:00 2:30-3:30
Harmony Hill School		295 to 44	40	8:15-9:00 3:00-4:00

CUMBERLAND OUT-OF-DISTRICT TRANSPORTATION OF PAROCHIAL/PRIVATE STUDENTS

Bishop Keough			15	6:30-2:00 (Cap. 19)

CUMBERLAND OUT-OF-DISTRICT TRANSPORTATION OF VOCATIONAL STUDENTS

Woonsocket	July 1, 81	H.S. along Mendon Rd.	25	11:45-1:45 (66 passengers)
Davies Vocational		123	30	7:30-8:00 2:30-3:30

LINCOLN OUT-OF-DISTRICT TRANSPORTATION OF SPECIAL EDUCATION STUDENTS

SPECIAL SCHOOLS ATTENDED	NO. OF PUPILS	HOW TRANSPORTED NOW	COST IF AVAILABLE FY181 BUDGET	PUBLIC OWNED VEHICLE YES/NO	IF VEHICLE LEASED INDICATE CONTRACT EXPIRATION DATE
School for Deaf Meeting Street	2	Bussette #22	$12,375 Base + $4486 mileage + Fuel Escalation	No	6/82
Ella Risk School Central Falls	2	Bussette #24	$12,375 Base + $0 mileage + Fuel Escalation	No	6/82
Old County School Smithfield	1				
Regional Center Cumberland	2	Wheelchair Bussette #26	$12,375 Base + $1762 mileage + Fuel Escalation	No	6/82
Woonsocket Workshop Woonsocket	1				
Behavior Development	1	School-District Bus	$11,400 Budget for bus only includes 2/3 cost of bus purchase + repairs and school fuel approx. $2500	Yes	-
Governor Center	1				
YMCA Providence	1				

LINCOLN OUT-OF-DISTRICT TRANSPORTATION OF PAROCHIAL/PRIVATE STUDENTS

Bishop Keough	20	Bus	$16,875 + Fuel Escalation	No	6/82
Woodlawn Regional	4				
Solomon Schecter Taft Ave.	1	Bus	included in cost of Bus #22 and School District Bus	No	6/82

LINCOLN OUT-OF-DISTRICT TRANSPORTATION OF SPECIAL EDUCATION STUDENTS

SPECIAL SCHOOLS ATTENDED	ROUTE TAKEN	MILES PER ROUND TRIP	TIME SCHEDULE/ CAPACITY OF BUSES	COMMENT
School for Deaf Meeting Street	146 to 95S to 195	88	16 passenger	4 Aides @$3600/Yr. 1 Town Aide
Ella Risk School Central Falls Old County School Smithfield	River Rd. Lonsdale Ave. Smithfield Ave. Dexter St.	59	16 passenger	This bus has an in-town Sp. Ed. Route also.
Regional Center Cumberland Woonsocket Workshop Woonsocket	Smithfield Ave. Great Rd. Farnum Pike Diamond Hill 295 - 146 Providence St.	71	16 passenger	Contract requires 6 mini buses must be used.
Behavior Development Governor Center YMCA - Providence	Smithfield Ave. 95, 146, 95	80	16 passenger	This bus has an in-town Sp. Ed. Pre-School run. 2 runs in afternoon 3 students @2:00pm 2 students @4:00pm

LINCOLN OUT-OF-DISTRICT TRANSPORTATION OF PAROCHIAL/PRIVATE STUDENTS

Bishop Keough Woodlawn Regional	Smithfield Ave. to 95	40	Full mini bus. Includes kindergarten route	Includes one bussette for both schools and one kindergarten trip at noon.
Solomon Schecter Taft Ave.	to Branch Ave. to Taft Ave.			

NORTH SMITHFIELD OUT-OF-DISTRICT TRANSPORTATION OF SPECIAL EDUCATION STUDENTS

SPECIAL SCHOOLS ATTENDED	NO. OF PUPILS	HOW TRANSPORTED NOW	COST IF AVAILABLE	PUBLIC OWNED VEHICLE YES/NO	IF VEHICLE LEASED INDICATE CONTRACT EXPIRATION DATE
Cumberland Regional	5	Mini-Bus	$83.00P/D	No	6/30/81
Flora Curtis	1	Mini-Bus	"	No	6/30/81
Learning Center	1	Mini-Bus	25.00P/D	No	6/30/81
Ella Risk	1	Cab	35.00P/D	No	6/30/81
Fogarty	2	Mini-Bus		Yes	
Burrillville School	1	Mini-Bus		Yes	
Woonsocket Skill Center	1	Cab Mini-Bus	6.00P/D -	No Yes	6/30/81

NORTH SMITHFIELD OUT-OF-DISTRICT TRANSPORTATION OF PAROCHIAL/PRIVATE STUDENTS

Catholic Regional Woonsocket	8	Bus	15.00P/D	No	6/30/81
Our Lady Queen of Martyrs	61	Bus	25.00P/D	No	6/30/81
Our Lady Queen of Martyrs Kindergarten	5	Mini-Bus		Yes	

NORTH SMITHFIELD OUT-OF-DISTRICT TRANSPORTATION OF VOCATIONAL STUDENTS

Davies Vocational	5	Bus	15.00P/D	No	6/30/81
Woonsocket Skill Center	6	Bus	11.00P/D	No	6/30/81
Cumberland Culinary	**6**	**Mini Bus**		**Yes**	**N/A**

NORTH SMITHFIELD OUT-OF-DISTRICT TRANSPORTATION OF SPECIAL EDUCATION STUDENTS

SPECIAL SCHOOLS ATTENDED	ROUTE TAKEN	MILES PER ROUND TRIP	TIME SCHEDULE/ CAPACITY OF BUSES	COMMENT
Cumberland Regional		40	8:30 - 2:00	Combined
Flora Curtis			8:45 - 2:30	
Learning Center		40	8:30 - 2:30	
Ella Risk		30	8:15 - 2:15	
Fogarty		30	9:00 - 3:00	
Burrillville School		16	8:10 - 1:58	
Woonsocket Skill Center	(Cab)	10	8:15	
	(Mini Bus)	10	1:30	

NORTH SMITHFIELD OUT-OF-DISTRICT TRANSPORTATION OF PAROCHIAL/PRIVATE STUDENTS

Catholic Regional Woonsocket, RI	12	8:15 - 2:15	Combined with Davies Bus
Our Lady Queen of Martyrs	6	8:05 - 2:15	
Our Lady Queen of Martyrs Kindergarten	30	12:30 - 2:45	

NORTH SMITHFIELD OUT-OF-DISTRICT TRANSPORTATION OF VOCATIONAL STUDENTS

Davies Vocational	18	8:00 - 2:45	
Woonsocket Skill Center	10		
Cumberland Culinary	18	9:45 - 11:20	

WOONSOCKET OUT-OF-DISTRICT TRANSPORTATION OF SPECIAL EDUCATION STUDENTS

SPECIAL SCHOOLS ATTENDED	NO. OF PUPILS	HOW TRANSPORTED NOW	COST IF AVAILABLE	PUBLIC OWNED VEHICLE YES/NO	IF VEHICLE LEASED INDICATE CONTRACT EXPIRATION DATE
Meeting St. School	2	Bus	$175.50 3 buses 2 aides	No	9/82
RI School for the Deaf	2	Bus		No	9/82
F. B. Sargeant Rehabilitation Center	15	Bus		No	9/82
Vocational Resources Houghton St.	2	Bus		No	9/82
Bradley Hospital	1	Bus		No	9/82
Burrillville and Bellingham			$47.50		
Cumberland Regional Center			$85.05		

WOONSOCKET OUT-OF-DISTRICT TRANSPORTATION OF VOCATIONAL STUDENTS

Davies Vocational	23	Bus	$40.00P/D	No	6/83

WOONSOCKET OUT-OF-DISTRICT TRANSPORTATION OF PAROCHIAL/PRIVATE STUDENTS

None

WOONSOCKET OUT-OF-DISTRICT TRANSPORTATION OF SPECIAL EDUCATION STUDENTS

SPECIAL SCHOOLS ATTENDED	IF VEHICLE LEASED INDICATE CONTRACT EXPIRATION DATE	ROUTE TAKEN	MILES PER ROUND TRIP	TIME SCHED./ COMMENTS CAPACITY OF BUSES
Meeting St. School	9/82	Rt. 146 195	40	8:30-2:30 16 students
RI School for Deaf	9/82	Rt. 146 Branch	32	8:30-2:30 16 students CAP.
F.B. Sargeant Rehabilitation Center	9/82	Rt. 145 Atwells Ave. to Broad St.	35	9:00-2:30 16 students CAP.
Vocational Resources Houghton St.	9/82	Rt. 146 to Branch	32	8:30-3:00
Bradley Hospital	9/82	Rt. 146 195 Veterans Parkway	42	8:30-3:00
Burrillville and Bellingham				
Cumberland Regional Center				

WOONSOCKET OUT-OF-DISTRICT TRANSPORTATION OF VOCATIONAL STUDENTS

Davies Vocational	6/83	Rt. 146	24	7:45-2:30

WOONSOCKET OUT-OF-DISTRICT TRANSPORTATION OF PAROCHIAL/PRIVATE STUDENTS

None

Appendix B

LOCATION OF TREATMENT CENTERS AND THE NUMBER OF STUDENTS FROM EACH COMMUNITY ATTENDING THESE CENTERS

TREATMENT CENTER	CUMBERLAND	LINCOLN	N. SMITHFIELD	WOONSOCKET	TOTAL
Behavior Development Mt. Hope Ave., Providence		1			
Bradley Hospital East Providence				1	
Burrillville High School			1		
Ella Risk School Central Falls		2	1		
F.B. Sargeant Rehabilitation Center YMCA, Providence		1		15	
Flora Curtis School Pawtucket, RI			1		
Fogarty Hospital Woonsocket			2		
Governor's Medical Center Providence	1	1			
Harmony Hill School Glocester	1				
Learning Center Blackstone Blvd., Prov.			1		
Meeting Street School East Providence	4	4		2	
Northern RI A.R.C. Woonsocket	5				
Old County Road School Smithfield	1	1			
Regional Center Monastery, Cumberland		2	5		

LOCATION OF TREATMENT CENTERS AND THE NUMBER OF STUDENTS FROM EACH COMMUNITY ATTENDING THESE CENTERS

TREATMENT CENTER	CUMBERLAND	LINCOLN	N. SMITHFIELD	WOONSOCKET	TOTAL
R. I. Hospital Providence	1				
R. I. School for the Deaf Providence	5	2		2	
Smithfield Jr. High	3				
Vocational Resources Houghton St., Prov.	4			2	
Windmill Street School Providence	1				
Woonsocket Workshop Fabian St., Woonsocket		1			

LOCATION OF VOCATIONAL OR PAROCHIAL SCHOOLS AND THE NUMBERS OF STUDENTS FROM EACH COMMUNITY ATTENDING THESE CENTERS

VOCATIONAL SCHOOLS					
Cumberland Culinary Cumberland			6		
Davies Vocational Lincoln	8	61 (in town)	5	23	
Woonsocket Regional Vocational Woonsocket	92 (afternoon only)		61 (morning only)		
PAROCHIAL SCHOOLS					
Bishop Keough Pawtucket	8	20			
Catholic Regional Woonsocket			8		

LOCATION OF PAROCHIAL SCHOOLS AND THE NUMBERS OF STUDENTS FROM EACH COMMUNITY ATTENDING THESE CENTERS

	CUMBERLAND	LINCOLN	N. SMITHFIELD	WOONSOCKET	TOTAL
Our Lady Queen of Martyrs Woonsocket			61 (5 Kindergarten)		
Solomon Schecter Hebrew Day School, Taft Ave., Prov.		1			
Woodlawn Regional Pawtucket		4			

Appendix C

PERCENTAGE OF BUS USAGE FOR OUT-OF-DISTRICT TRANSPORTATION WITH PLAN A

	North Smithfield	Lincoln	Cumberland	Woonsocket
Route 1 (students) (% of usage)	2 50%	2 50%	-	-
Route 2	6 15%	-	8 20%	25 64%
Route 3	-	27 67.5%	13 32.5%	-
Route 4	-	3 16%	1 5%	15 79%
Route 5	-	4 36%	4 36%	3 27%
Route 6	-	1 17%	5 83%	-
Route 7	-	-	6 75%	2 25%
Route 8	-	1 17%	5 83%	-
Route 9	5 71%	2 29%	-	-
Burrillville H.S.	1 bus			
Our Lady Queen of Martyrs	1 bus			
Catholic Regional	1 bus			
Cumberland Culinary	1 bus			
Woonsocket Vocational	-	-	2 buses	-
Fogarty Hospital	1 bus			
TOTAL BUS USAGE	6.36	2.325	5.35	1.95

PERCENTAGE OF BUS USAGE FOR OUT-OF-DISTRICT TRANSPORTATION IN PLAN B

	North Smithfield	Lincoln	Cumberland	Woonsocket
Route 1 (Students)	2	2	-	-
(% of usage)	50%	50%		
Route 2	11	1	-	25
	30%	3%	-	67%
Route 3	1	27	21	2
	2%	54%	40%	4%
Route 4	-	3	-	15
		17	-	83%
Route 5	-	4	4	3
	-	36%	36%	27%
Route 6	-	1	5	-
	-	17%	83%	-
Route 7	-	-	7	2
			77%	23%
Route 8	-	1	5	-
	-	17%	83%	-
Route 9	-	-	-	-
Cumberland Culinary				
Burrillville H.S.	1 bus			
Our Lady Queen of Martyrs	1 bus			
Catholic Regional	1 bus			
Woonsocket Vocational			2 buses	
Fogarty Hospital	1 bus			
TOTAL BUS USAGE	5.82	1.94	5.19	2.04

PERCENTAGE OF BUS USAGE FOR OUT-OF-DISTRICT TRANSPORTATION WITH PLAN C

	North Smithfield	Lincoln	Cumberland	Woonsocket
Route 2 (Students)	2	2	-	-
(% of usage)	50%	50%		
Route 2	5	-	-	23
	18%			82%
Route 2A	1	3	-	-
	25%	75%		
Route 2B	-	-	8	
			100%	-
Route 3A	-	25	-	-
		100%		
Route 3B	-	-	9	4
			69%	31%
Route 4	-	1	-	15
		6%		94%
Route 4A	-	1	3	-
		25%	75%	
Route 5	-	-	-	3
				100%
Route 5A	-	4	4	-
		50%	50%	
Route 6	-	1	5	-
		17%	83%	
Route 7	-	-	-	-
Route 8	-	1	5	-
		17%	83%	
Route 9	5	2	-	-
	71%	29%		
Burrillville H.S.	1 bus			
Our Lady Queen of Martyrs	1 bus			

PERCENTAGE OF BUS USAGE FOR OUT-OF-DISTRICT TRANSPORTATION WITH PLAN C (continued)

	North Smithfield	Lincoln	Cumberland	Woonsocket
Catholic Regional	1 bus			
Cumberland Culinary	1 bus			
Woonsocket Vocational			2 buses	
Fogarty Hospital	1 bus			